

WASHINGTON STATE DEPARTMENT OF HEALTH OFFICE OF FOOD SAFETY AND SHELLFISH PROGRAMS

ANNUAL GROWING AREA REVIEW

PREPARED BY: Donald J. Melvin, Environmental Specialist

AREA: Oakland Bay

YEAR ENDING: December 31, 2005

CLASSIFICATION: Conditionally Approved, Prohibited

ACTIVITIES IN THE GROWING AREA IN 2005:

Samples were collected 13 times from Oakland Bay. The area was sampled 12 times when it was in open status. The area was closed to commercial harvest for a total of 45 days in accordance with the conditional area management plan requirement for a 5 day closure following a 24 hour rainfall accumulation of one inch or more. A hydrographic study was completed and an STP evaluation was completed on the Shelton wastewater treatment plant. The sewage treatment plant component of the conditional area management plan for the north end of Oakland Bay and for the Chapman Cove region of the bay (see attached growing area map) has been eliminated so that these regions are now managed only according to rainfall conditions. Pollution source investigations involving DOH, the Department of Ecology, Mason County Environmental Health, the Squaxin Tribe, and the Mason Conservation District are ongoing.

ANALYTICAL RESULTS OF WATER SAMPLES:

Table #1 is a summary of the most recent 30 samples collected from the Oakland Bay sampling stations located in the central region of the bay where management is still based on a combination of STP operation and rainfall. The Table 1 summary shows that all stations pass the NSSP water quality standard under the existing management plan. Table 2 summarizes the most recent samples collected from the north end of Oakland Bay and from the Chapman Cove region where conditional area management is based only on rainfall. The Table 2 summary shows that all stations in these areas pass the NSSP water quality standard, however, sampling stations #614 and #615 are threatened due to elevated bacteria levels. Individual sample results for stations #614 and #615 are shown in Tables 3 and 4 respectively. The shaded rows in Tables 3 and 4 are sampling events conducted when the area was closed to harvest under the current management plan. These sampling dates are excluded from the Table 2 summary.

CHANGE IN ACTUAL POLLUTION SOURCES THAT IMPACT THE GROWING AREA:

We currently have no information indicating that the area has new sources of pollution.

CLASSIFICATION STATUS:

- ☐ Well within the classification standards
- ☐ Meets standards but some concerns
- ☒ Meets standards but threatened with a downgrade in classification
- ☐ Fails to meet classification standards

REMARKS AND RECOMMENDATIONS:

Current information indicates that the area is correctly classified and should remain classified as conditionally approved. Shelton Creek, Goldborough Creek, Campbell Creek, portions of the upper end of Cranberry Creek, portions of the north end of Oakland Bay, and Shelton Harbor are on the 303d list for fecal coliform.

**WASHINGTON STATE DEPARTMENT OF HEALTH
OFFICE OF FOOD SAFETY AND SHELLFISH PROGRAMS**

ANNUAL GROWING AREA REVIEW

MANAGEMENT PLAN EVALUATION – BRIEFLY DESCRIBE THE FOLLOWING COMPONENTS:

- 1. Have all parties involved complied with the conditions in the management planYes
- 2. Has reporting been adequate to manage the conditional areaYes
- 3. Does the area consistently meet approved area criteria when it is open for harvestYes
- 4. Has a field inspection of critical pollution sources been conducted.....Yes

TABLE 1
SUMMARY OF MARINE WATER DATA (APC)

Growing Area: **OAKLAND BAY**

Classification: **Conditionally Approved, Prohibited**

From **07/08/2003** To **12/13/2005**

FECAL COLIFORM ORGANISMS/100 ML

Rainfall Information is **Day 0** for 4 days prior between **0.00** and **0.99**

Station Number	Classification	Number of Samples	Range	Geometric Mean	% Samples > 43	Meets Std.
114	Prohibited	31	1.7 - 110.0	4.7	3.2	Yes
115	Prohibited	30	1.7 - 49.0	4.2	6.6	Yes
122	Prohibited	30	1.7 - 11.0	2.8	0.0	Yes
124	Prohibited	31	1.7 - 33.0	4.1	0.0	Yes
116	Conditionally Approved	30	1.7 - 33.0	3.3	0.0	Yes
117	Conditionally Approved	30	1.7 - 17.0	2.6	0.0	Yes
119	Conditionally Approved	30	1.7 - 49.0	3.9	3.3	Yes
120	Conditionally Approved	30	1.7 - 23.0	3.3	0.0	Yes
123	Conditionally Approved	30	1.7 - 33.0	3.2	0.0	Yes
128	Conditionally Approved	30	1.7 - 79.0	4.2	3.3	Yes

All tides information is presented

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100ml with not more than 10 percent greater than 43 organisms/100ml. The above table shows bacteriological results in relation to program standards.

TABLE 2
SUMMARY OF MARINE WATER DATA (SRS)

Growing Area: **OAKLAND BAY**

Classification: **Conditionally Approved**

From **05/07/2003** To **12/13/2005**
FECAL COLIFORM ORGANISMS/100 ML

Rainfall Information is **Day 0** for 4 days prior between **0.00** and **0.99**

Station Number	Classification	Number of Samples	Range	Geometric Mean	Est. 90th Percentile	Meets Std.
118	Conditionally Approved	32	1.7 - 49.0	3.9	11.0	Yes
121	Conditionally Approved	32	1.7 - 33.0	3.5	10.0	Yes
125	Conditionally Approved	32	1.7 - 17.0	3.2	8.0	Yes
126	Conditionally Approved	30	1.7 - 23.0	4.5	11.0	Yes
127	Conditionally Approved	32	1.7 - 49.0	3.1	9.0	Yes
129	Conditionally Approved	32	1.7 - 49.0	4.9	18.0	Yes
614	Conditionally Approved	44	1.7 - 240.0	7.5	41.0	Yes
615	Conditionally Approved	45	1.7 - 350.0	7.2	35.0	Yes
639	Conditionally Approved	45	1.7 - 49.0	4.3	18.0	Yes

All tides information is presented

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100 ml and an estimate of the 90th percentile not greater than 43 organisms/100 ml. The above table shows bacteriological results in relation to program standards.

TABLE 3

SUMMARY OF SHELLFISH GROWING AREAS

WATER QUALITY STUDY RESULTS

Growing Area: OAKLAND BAY

Sampling Station Number: 614

Classification: Conditionally Approved

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
05/07/2003	09:19	Flood	2	12	1
06/03/2003	09:09	Ebb	6.8	15	14
07/08/2003	13:55	Flood	27	20	22
08/04/2003	12:22	Flood	13	20	10
09/15/2003	10:35	Flood	11	14	15
10/15/2003	09:31	Flood	2	12	0
11/05/2003	14:29	Flood	2	8	14
12/10/2003	10:44	Ebb	23	6	12
01/15/2004	10:12	Flood	11	13	0
02/05/2004	10:25	Ebb	4.5	5	0
02/10/2004	09:50	Ebb	1.7	5	7
02/17/2004	12:50	Flood	1.7	6	4
02/24/2004	10:40	Ebb	4.5	8	17
03/02/2004	13:55	Flood	1.7	10	5
03/08/2004	09:27	Ebb	7.8	8	8
03/09/2004	09:50	Ebb	7.8	10	5
03/18/2004	14:47	Flood	1.7	10	19
03/23/2004	10:30	Ebb	33	10	11
03/30/2004	11:15	Flood	13	11	15
04/06/2004	08:55	Ebb	1.7	11	14
04/06/2004	09:00	Ebb	1.8	9	16
04/13/2004	11:20	Flood	1.7	13	23
04/20/2004	09:55	Ebb	7.8	12	24
04/27/2004	10:50	Flood	4.5	15	26
05/05/2004	09:01	Ebb	17	12	20
06/21/2004	08:53	Ebb	120	17	14
07/20/2004	09:05	Ebb	13	20	23
08/24/2004	13:41	Flood	11	20	23
09/08/2004	14:02	Flood	1.7	19	27
10/13/2004	08:33	Ebb	2	13	20
11/02/2004	11:08	Flood	130	9	0
11/18/2004	08:55	Flood	4.5	10	17
12/02/2004	11:09	Flood	4.5	7	15
01/05/2005	11:20	Flood	11	3	0
02/01/2005	12:01	Ebb	33	7	2
03/01/2005	10:05	Ebb	2	7	8
04/11/2005	09:44	Ebb	49	10	6
05/10/2005	09:22	Ebb	170	13	4
05/23/2005	08:45	Ebb	46	12	6
06/08/2005	08:24	Ebb	23	13	5
07/06/2005	07:33	Ebb	240	18	8
08/10/2005	10:04	Flood	70	18	18
09/20/2005	09:28	Ebb	2	16	26
10/18/2005	10:18	Ebb	31	14	26
11/16/2005	09:51	Ebb	1.7	7	18
12/13/2005	12:10	Flood	7.8	6	12

Geometric Mean: 8.6

Estimated 90th Percentile: 54

TABLE 4
SUMMARY OF SHELLFISH GROWING AREAS
WATER QUALITY STUDY RESULTS

Growing Area: **OAKLAND BAY**

Sampling Station Number: **615**

Classification: **Conditionally Approved**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
05/07/2003	09:36	Flood	23	13	0
06/03/2003	09:23	Ebb	4.5	16	23
07/08/2003	14:20	Flood	1.7	20	28
08/04/2003	11:51	Flood	2	20	28
09/16/2003	08:30	Flood	1.7	16	25
10/15/2003	09:45	Flood	1.7	14	24
11/05/2003	14:08	Flood	1.7	10	22
12/10/2003	10:23	Ebb	6.8	7	14
01/15/2004	10:29	Flood	23	13	3
01/15/2004	12:22	Ebb	49	13	6
02/05/2004	10:07	Ebb	11	5	5
02/10/2004	10:15	Ebb	1.7	6	13
02/17/2004	13:13	Flood	6.8	6	16
02/24/2004	11:00	Ebb	2	8	23
03/02/2004	14:18	Flood	1.7	11	14
03/08/2004	09:07	Ebb	17	8	8
03/09/2004	09:40	Ebb	1.8	10	15
03/18/2004	14:35	Flood	1.7	10	24
03/23/2004	10:15	Ebb	11	10	17
03/30/2004	11:00	Flood	2	11	23
04/06/2004	09:19	Ebb	2	10	15
04/06/2004	09:27	Ebb	6.8	11	10
04/13/2004	11:50	Flood	11	13	26
04/20/2004	09:35	Ebb	1.7	11	24
04/27/2004	11:17	Flood	1.7	17	28
05/05/2004	09:20	Ebb	22	14	21
06/21/2004	09:09	Ebb	14	19	25
07/20/2004	09:22	Ebb	17	21	25
08/24/2004	14:02	Flood	7.8	20	26
09/08/2004	14:19	Flood	4.5	19	26
10/13/2004	08:59	Ebb	13	14	20
11/02/2004	11:30	Ebb	240	9	5
11/18/2004	09:16	Flood	13	11	24
12/02/2004	10:50	Flood	7.8	7	16
01/05/2005	11:45	Flood	4.5	4	20
02/01/2005	12:23	Ebb	7.8	7	4
03/01/2005	10:26	Ebb	49	7	15
04/11/2005	10:07	Ebb	79	10	12
05/10/2005	09:47	Ebb	1600	13	8
05/23/2005	08:55	Ebb	14	13	15
06/08/2005	08:43	Ebb	13	16	19
07/06/2005	07:52	Ebb	350	18	5
08/10/2005	09:40	Flood	1.7	20	26
09/20/2005	08:55	Flood	7.8	17	26
10/18/2005	11:04	Ebb	23	14	24
11/16/2005	09:28	Ebb	23	8	19
12/13/2005	11:47	Flood	11	6	20

Geometric Mean: 8.7

Estimated 90th Percentile: 62

